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12/28/2000

Thomas J. Grimsley

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10/03/2003

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EXAMINER

KAO, CHIH CHENG G

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/750,426

Applicant(s)

GRIMSLEY, THOMAS J.

Examiner

Chih-Cheng Glen Kao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 03 July 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. The proposed drawing correction filed on 7/3/2003 is approved. Corrected drawings are required in reply to this Office action.

Claim Objections

2. Claim 23 is objected to because of the following informalities, which appear to be minor draft errors creating lack of antecedent basis problems: (claim 23, line 2, "the incoming wavelength"). This objection may be obviated by replacing "the" with - an- - in line 2 of claim 23. For purposes of examination, the claim will be treated as such. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-8, 11, 12, 15-17, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. (US Patent 5135891) in view of Koizumi et al. (US Patent 5698892).

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4. The following is with regards to claims 1-3, 5-7, and 21.

With regards to claim 1, Ikeno et al. discloses a method and device of fabricating an electro-optical device (Title and Figs. 5A-5D) comprising providing a substrate (Fig. 5C, #1) with insertion of a first photosensor (Fig. 5A, #7), applying a first filter layer above a substrate (Fig. 5C, #27), applying an inter-filter layer over at least the first filter layer (Fig. 5C, #25), and applying a second filter layer over at least a portion of the inter-filter layer without removing the inter-filter layer (Fig. 5C, #28).

With regards to claim 2, Ikeno et al. further discloses applying a base layer before applying the first filter (Fig. 5C, #24).

With regards to claim 5, Ikeno et al. further discloses an inter-filter layer as an optically transmissive, film-forming polymer material (col. 5, lines 6-10 and 50).

With regards to claim 6, Ikeno et al. further discloses the first and second filters with pigments (col. 5, lines 35-40).

With regards to claim 7, Ikeno et al. further discloses applying the inter-filter layer on an area of the substrate not covered by the filter layer, thereby smoothing a top surface of the electro-optical device (Fig. 5C, #25).

With regards to claim 21, Ikeno et al. further discloses applying an inter-filter layer (Fig. 5C, #25) over a patterned first filter (Fig. 5C, #27) and one of the substrate or a base layer (Fig. 5C, #24).

However, Ikeno et al. does not disclose mounting in an image forming system.

With regards to claims 1 and 3, Koizumi et al. teaches mounting in an image forming system (col. 1, lines 12-25).

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It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have mounting in an image forming system of Koizumi et al. with the method and device of Ikeno et al., since one would be motivated to mount it for forming images as implied from Koizumi et al. (col. 1, lines 12-25).

5. With regards to claims 8, 11, 12, 15-17, and 20, Ikeno et al. in view of Koizumi et al. suggests a method and device as recited above.

With regards to claims 8 and 17, Ikeno further discloses providing a substrate (Fig. 5C, #1) with insertion of a first and second photosensor (Fig. 5A, #7), applying a base layer on the substrate (Fig. 5C, #24), covering an area of the base layer overlaying the first photosensor with a patterned first filter layer preferentially allowing light having a wavelength within a first range to reach the first photosensor (Fig. 5C, #27), applying an inter-filter layer over at least the first filter layer (Fig. 5C, #25), and applying a patterned second filter layer over the second photosensor.

With regards to claim 11, Ikeno et al. further discloses the first and second filters with pigments (col. 5, lines 35-40).

With regards to claims 12, 15, and 20, Ikeno et al. further discloses applying a second inter-filter layer on the second filter and on the first inter-filter layer not covered by the second filter, thereby smoothing a second top surface (Fig. 5C, #26).

With regards to claim 16, Ikeno et al. further discloses a linear array chip (Fig. 7).

However, Ikeno et al. does not specifically disclose a second filter allowing light having a wavelength within a second range to reach the second photosensor.

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With regards to claims 8 and 17, Koizumi et al. further teaches a second filter allowing light having a wavelength within a second range to reach the second photosensor (Fig. 11D, “B”, “R”, or “G”).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have different color ranges of Koizumi et al. with the suggested method and device of Ikeno et al. in view of Koizumi et al., since one would be motivated to in order to have the capability of providing multi-functions and greater processing of the image signal as implied from Koizumi et al. (col. 1, lines 24-27).

6. Claims 4, 9, 10, 13, 14, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. in view of Koizumi et al. as applied to claims 1 and 8 above, and further in view of McColgin et al. (US Patent 4553153).

7. With regards to claims 4, 9, 13, and 18, Ikeno et al. in view of Koizumi et al. suggests a method and device as recited above.

With regards to claims 9, 13, and 18, Ikeno et al. further discloses the inter-filter layer or base layer as translucent or clear (col. 5, lines 6-10 and 50).

However, Ikeno et al. does not specifically disclose an inter-filter layer as colorless.

With regards to claims 4, 9, 13, and 18, McColgin et al. teaches an inter-filter layer as colorless (Fig. 2, #16, col. 7, lines 20-30, and col. 8, lines 4-8).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the inter-filter layer as colorless of McColgin et al. with the

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suggested method and device of Ikeno et al. in view of Koizumi et al., since one would be motivated to have a colorless layer to have the filter portion of the color filter be the only portion that is filtering as implied from McColgin et al. (col. 7, lines 20-30) rather than having two filters would create a combined and more calculations in figuring out what exactly will be filtered.

8. With regards to claims 10, 14, and 19, Ikeno et al. in view of Koizumi et al. suggests a method as recited above.

However, Ikeno et al. does not disclose an inter-filter layer with acrylic.

McColgin et al. teaches an inter-filter layer with acrylic (col. 1, lines 25-62).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the inter-filter layer with acrylic of McColgin et al. with the suggested method of Ikeno et al. in view of Koizumi et al., since it would have been within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. One would be motivated to have use acrylic for its high planarization factors as implied from McColgin et al. (col. 5, lines 25-62).

9. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. in view of Koizumi et al. as applied to claim 1 above, and further in view of Iizuka (US Patent 5172206).

Ikeno et al. in view of Koizumi et al. suggests a method as recited above.

However, Ikeno et al. does not disclose not polishing or grinding the inter-filter layer.

Iizuka teaches not polishing or grinding the inter-filter layer (Fig. 1, #5b or 5c).

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It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have no polishing or grinding of Iizuka with the method of Ikeno et al. in view of Koizumi et al., since one would be motivated to provide a rough surface for better adhesion between the layers without having to worry about layers falling off the edge, which is implied from Iizuka (Fig. 1).

10. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. in view of Koizumi et al. as applied to claim 1 above, and further in view of Park et al. (US Patent 5053298).

Ikeno et al. in view of Koizumi et al. suggests a method as recited above.

However, Ikeno et al. does not disclose an inter-layer with a color to modify an incoming wavelength.

Park et al. teaches an inter-layer with a color to modify an incoming wavelength (Fig. 1, #9 or 15).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the color inter-layer of Park et al. with the method of Ikeno et al. in view of Koizumi et al., since one would be motivated to incorporate this for filtering any one of the colored light magenta, cyan, or yellow as shown by Park et al. (col. 1, lines 56-62).

Response to Arguments

11. Applicant's arguments with respect to claims 21-23 have been considered but are moot in view of the new ground(s) of rejection.

12. Applicant's arguments filed 7/3/2003 have been fully considered but they are not persuasive.

With regards to claims 1, 8, and 17, In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the "first intermediate layer 28 has not been ground, polished or otherwise removed") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. The claim specifically recites "applying a second filter layer over at least a portion of the inter-filter layer without removing the inter-filter layer". Ikeno et al. shows "applying a second filter layer (Fig. 5C, #28) over at least a portion of the inter-filter layer without removing the inter-filter layer" (Fig. 5C, #25). There is an inter-filter layer there (Fig. 5C, #25). Thus, the inter-filter layer was not *entirely* removed. This inter-filter layer (Fig. 5D, #25) is permanently disposed there.

With regards to the typographical error, "Koizumi et al. does not disclose mounting an image forming system", the Examiner thanks Applicants for noting the typographical error and interpreting Ikeno et al. as not disclosing mounting its device in an image forming system. However, the combination of Ikeno et al. in view of Koizumi et al. is still proper "since one would be motivated to mount it for forming images as implied from Koizumi et al. (col. 1, lines 12-25). This is a reason for combination, since mounting such a device to wires is needed to send signals of an image from the photodetector to an external processing unit.

With regards to page 5, lines 1-2, and Ikeno et al. (Title and Figs. 11A-11F), the Examiner would like to again thank Applicants for noting the typographical error. Please note the change above in paragraph 4.

With regards to claim 8, and “the second filter layer allowing light having a wavelength within a second range to reach the second photosensor”, Koizumi et al. was not incorporated to show a second filter layer allowing light having a wavelength within a second range to reach the second photosensor. It was incorporated to show a second filter allowing light having a wavelength within a second range to reach the second photosensor. The second color filter layer was already disclosed by Ikeno et al. (col. 5, lines 36-37). Ikeno et al. did not specifically disclose allowing light having a wavelength within a second range to reach the second photosensor, which was why Koizumi et al. was incorporated for that teaching.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (703) 605-5298. The examiner can normally be reached on M - F (9 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (703) 308-4858. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



gk



DAVID V. BRUCE
PRIMARY EXAMINER